

# NEW INVADERS WATCH PROGRAM

## *HOW-TO-MAKE VOUCHER SPECIMENS OF TARGET PLANTS AND INSECTS*

A voucher is a physical entity or image that is proof of an occurrence. New Invaders Watch List (NIWL) wants vouchers as proof that a target species has been seen. Vouchers have a variety of uses, such as documenting occurrence or revealing the geographic spread invaders over time. Once received by a herbarium (a plant specimen "library") or insect collection, vouchers may be mounted, labeled and kept for future reference and research. Providing some type of voucher is important because it allows verifiers to confirm the correct identification before data is entered into the database, and because there are costs associated with reporting an invader, including tracking of information and the employment of control measures.

This document contains instructions for making a pressed plant or dry or alcohol voucher for insects. However, for purposes of the NIWL, other kinds of vouchers are acceptable. If you cannot provide a physical specimen, then NIWL will accept digital photos (these are the preferred type of image voucher), which may be uploaded during reporting through the web, or prints and slides. The latter can be sent directly to NIWL, with a copy of your completed data collection sheet.

### Plants

#### Equipment needed

1. **Plant Press** (or any device in which to flatten and dry specimens). Instructions below
2. **NIWL Data Collection Form** (or equivalent listing of specimen-related data.) May be obtained by visiting the NIWL website at <http://newinvaders.org>.

#### Basic steps for preparing target plant vouchers

1. **Take a photo of the plant.**
2. Collect plant in the field. Include as much of the plant as possible, even if you have to fold or cut into sections. Put it into plastic bag and keep it cool to prevent wilting. **Remember that Giant Hogweed should be handled only while wearing gloves, long sleeves and long pants.**
3. Record specimen data on NIWL Data Collection Form.
4. Press and dry plant quickly and completely at room temperature with good air circulation (see pressing instructions below).
5. Send specimen in cardboard and newspaper, and a copy of NIWL Data Collection Form to **Dr. Rick Phillippe, Illinois Natural History Survey, 1816 S Oak St., Champaign, IL 61820.**

#### What To Collect

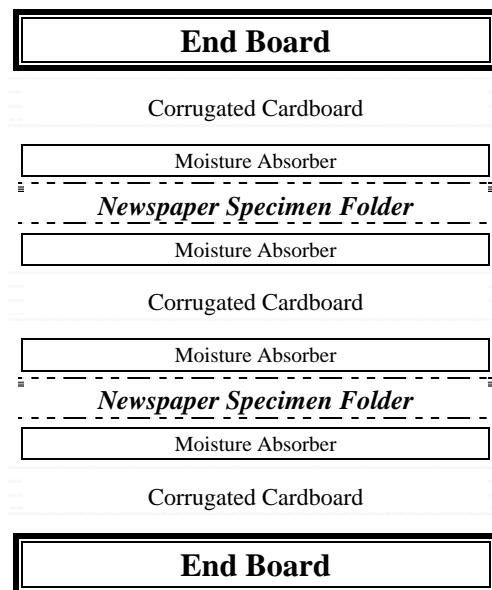
Select one or more healthy plants that look typical of the population. Take samples of the whole plant, if possible, or enough **leaves and stems** to show leaf shape and size, opposite or alternate **branching**, and **buds**. If possible, include **flowers and/or fruits**, which may be needed to confirm a plant's precise identity. For grasses and grass-like plants, try to include roots. For large specimens, fold stems into a V or N shape. Thick stems may be cut in half lengthwise. For small plants, collect several and press together. Show upper and lower surfaces of leaves and flowers. Press flowers with the blossom open, and if possible slice one in half lengthwise to show internal structures. Be sure to press the plant before it wilts. Aquatic plants should be patted dry before pressing.

#### Pressing Plants

Use a standard-sized (12 x 18 inch) plant press, if you have one, or make your own. Herbarium specimens are mounted (glued) on standard 11.5 x 16.5 inch sheets of heavy paper. Specimens must not exceed this size (though large plants often are divided up and glued to multiple sheets). For this project, plant press dimensions can be as small as **9 x 12 inches**. This makes it easy to carry the press in a backpack, as well as to send specimens by mail (in large, business-size envelopes).

## Making A Portable Plant Press

- **End Boards.** Prepare two 9 X 12 inch rectangles of a rigid material. Use plywood, masonite, pegboard, the backs of two clipboards, the covers from a 3-ring binder, or even cardboard (several sheets glued together for rigidity). Between the end boards – and cut to the same dimensions -- place alternating layers of corrugated cardboard, moisture absorbers, and newspaper specimen "folders." See diagram below.
- **Corrugated Cardboard.** Cut from corrugated boxes, having the lines of corrugation run across the shortest distance. This will enhance air flow through the press.
- **Moisture Absorber.** To wick moisture away from the drying specimens, use sheets of newspaper or paper-toweling. Sheets of thick blotter paper work well, if available.
- **Newspaper Specimen "Folder."** Specimens are arranged carefully within a folded piece of newspaper (like placing a document in a file folder).
- **Assembling the press.** When putting plants in the press, each newspaper specimen folder is sandwiched between moisture-absorbing layers and cardboard. For bulky specimens, extra layers of moisture absorber and cardboard may be needed. Tie the press together tightly with rope, bungee cords, large rubber bands, or buckle straps. You may need to adjust tightness as plants dry and flatten out. To quicken drying for high-moisture plants, change the folder and moisture absorbing layers at least once. Include 5 to 10 (or more) specimen folders – and surrounding layers – in your press, or as many as you can comfortably carry.



## Specimen Information

For each specimen or field observation, basic information about the occurrence is needed (see Data Collection Form). For all specimens collected, make sure that all documentation stays with, or can be linked to, the sample. We suggest putting a temporary number on the newspaper specimen folder. For example, you can number your NIWL Data Collection Forms consecutively and use the same number as a temporary placeholder in the plant folder to link location information with the specimen. However, you must send in a copy of the NIWL Data Collection Form with each voucher.

## Mail specimen(s), with the NIWS reporting form to:

**Dr. Rick Phillipe**  
**New Invaders Watch List**  
**Illinois Natural History Survey**  
**1816 S Oak St.**  
**Champaign, IL 61820**

## Insects

### Equipment needed

1. **Pill bottle, baby food jar, other small, tightly closing container**
2. **Cotton**
3. **70% rubbing alcohol**
4. **NIWL Data Collection Form** (a copy is acceptable) The Data Collection Form may be obtained by visiting the NIWL website at <http://ctap.inhs.uiuc.edu/newinvaders/home.aspx>

### Basic steps for preparing target insect vouchers

1. Take a photo of the insect, if possible, email image to edewalt@inhs.uiuc.edu.
2. Collect the insect into a container and cover with 70% rubbing alcohol. **Do not transport these insects alive since they might be spread inadvertently!**
3. Record specimen data on NIWL Data Collection Form.
4. Leave in alcohol for couple hours, stuff container with cotton to absorb the alcohol, dump off excess alcohol. Put container in plastic bag and close tight.
5. Pack specimen in small box tightly packed with styrofoam peanuts or newspaper, include NIWL Data Collection Form and send to the **Dr. R. Edward DeWalt, Illinois Natural History Survey, Insect Collection, 1816 S Oak St., Champaign, IL 61820.**